100 mm
A5
1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
28
32
36
40
45
50
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz1234567890
ABCDEFGHIJKLMNOPQRSTUVWXYZ
abcdefghijklmnopqrstuvwxyz
1234567890
1.0 mm
1.5 mm
2.0 mm

DOCUMENT RESUME

ED 306 968 JC 890 127

AUTHOR Dougherty, Kevin J.
TITLE Organizational Alternatives to the Present Community College.
PUB DATE Mar 89
NOTE 41p.; Paper presented to the Annual Meeting of the American Educational Research Association (San Francisco, CA, March 27-31, 1989).
PUB TYPE Information Analyses (070) -- Speeches/Conference Papers (150)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *College Role; *College Transfer Students; *Community Colleges; Educational Attainment; *Educational Change; Educational Improvement; Educational Planning; *Organizational Change; School Responsibility; Student Educational Objectives; Two Year Colleges

ABSTRACT

Community college entrants lag behind four-year college entrants in their educational and economic attainment, and most significantly with respect to baccalaureate attainment. Generally, proposals that address the improvement of community colleges' baccalaureate preparation and transfer functions focus on either "nonstructural" or "structural" reforms. Nonstructural reforms include: (1) providing more personal and extensive tutoring, developing new kinds of remedial courses, and setting time limits for the completion of remedial coursework; (2) encouraging faculty-student interaction out of class, integrating students' jobs and academic life, and scheduling students in blocks of classes; (3) providing better transfer advising, exposing potential transfer students to four-year colleges, improving financial aid, and making it easier to transfer vocational credits; and (4) reducing post-transfer attrition by accepting more credits and improving the social integration of transfer students on campus. Structural reforms, on the other hand, recognize that obstacles to baccalaureate attainment exist in the organization, as well as the operations, of community colleges. Three main proposals have been made for changing the colleges' structure: ending the comprehensive nature of the community college and focusing strictly on its vocational-technical role; converting community colleges into two-year branch campuses of state universities; and converting community colleges into four-year colleges. The structural reforms will require further debate, but the comparatively uncontroversial nonstructural reforms can be implemented immediately to achieve significant and relatively immediate benefits. (ALB)

ORGANIZATIONAL ALTERNATIVES TO THE PRESENT COMMUNITY COLLEGE

Kevin J. Dougherty
Department of Sociology
Manhattan College

Paper presented to the annual meeting
of the American Educational Research Association

March 1989

ORGANIZATIONAL ALTERNATIVES TO THE PRESENT COMMUNITY COLLEGE

The American community college is a paradox.

It has brought great benefits to American education as it has expanded to encompass over a third of all college enrollments. It has opened access to many students who would not be able to attend four-year colleges through its proximity, low cost, and breadth of programs (Medsker and Trent, 1964; and Grubb, 1988). The community college has also provided training for new occupations that the four-year colleges have been slow to address, such as the allied health semiprofessions. And the community college has provided adult and community education for those who want college level courses without having to go to a traditional college.

At the same time, the community college is not simply a cornucopia. It also hinders the educational and economic success of those 30 to 50% of its students who wish to eventually transfer to a four-year college.[1] Clearly, community-college entrants and four-year college entrants will differ in their educational and economic attainment simply because these two groups differ in their hopes, family background, and high school record. But if we control for these differences, we still find large and statistically significant differences in educational and economic attainment. Baccalaureate aspirants entering a community college receive fewer baccalaureates, attain fewer years of higher education, and secure less prestigious jobs than do comparable four-year-college entrants (Dougherty, 1987).[2] These findings are summarized in Tables 1 and 2.

---

1. This estimate is derived from Cohen and Brawer (1987: 95), Dougherty (1987: 87), and Richardson and Bender (1987: 190).

2. With regard to financial success, community college baccalaureate aspirants make as much money in the short run as do four-year college entrants. But there is strong reason to believe that in the long run community college entrants fall far behind in their earning power.

Table 1
EDUCATIONAL ATTAINMENT OF ENTRANTS TO TWO-YEAR COLLEGES, FOUR-YEAR COLLEGES, AND POSTSECONDARY VOCATIONAL SCHOOLS

	Nunley-Breneman (1988)	Velez (1985)	Anderson (1984)	Alba-Lavin (1981)	Astin (1982)	Godfrey-Holmstrom (1970)
STUDY CHARACTERISTICS						
Data set used	NLS-72	NLS-72	NLS-72	CUNY	ACE	Own
Year students began college	1972	1972	1972	1970	1971	
Year students left college						1967
Year students followed up	1979	1979	1979	1975	1980	1959
Type of students studied	BA Asps	Acad Prog	Acad Prog	BA Asps	BA Asps	Acad, Voc.
FINDINGS						
% Attaining B.A.						
Four-year colleges						
public and private	NA	79.0%			NA	
public only				31.2%		
state college only			NA			
Two-year colleges						
public and private		31.0%				
public only	NA		NA			
community colleges				12.8%	NA	37.9%
vocational-technical institutes						6.1%
Difference in Percentage						
no controls	NA	48.0%	NA	18.4%	NA	31.8%
with controls	11.5%[a]	18.7%*	13.4%*	11.2%*	NA[b]	NA
Years of Education Attained						
Four-year colleges						
public and private	NA					
state college only			NA			
Two-year colleges						
public	NA		NA			
Difference in Years						
no controls	NA		NA			
with controls	0.16		0.25*			

Source: Dougherty (1987; and forthcoming)

	Munley-Breneman (1988)	Velez (1985)	Anderson (1984)	Alba-Lavin (1981)	Astin (1982)	Godfrey-Holmstrom (1970)
CONTROL VARIABLES						
Social background						
-Sex	X	X	X	X	X	
-Race	X	X	X	X	X	
-SES	X	X	X		X	
-Age					X	
-Language spoken at home	X	X				
-Religion		X	X			
-Marital status	X					
-Location of home	X					
Aspirations						
-Student's educ. asps.	X[c]	X	X	X[c]	X[c]	
-Student's occ. asps.			X		X	
-Parents' educ. asps.	X	X	X			
-Peers' post-HS plans	X					
-College decision date	X					
-Student's perception of college ability	X		X			
High School Experiences						
-Test scores		X	X		X	
-Grades or class rank	X	X	X	X	X	
-Curriculum or track	X	X	X	X	X	
-Hours spent on homework	X					
-Hours spent at job	X					
-Location of high school	X					
-Racial composition of high school					X	
College Experiences						
-Living arrangements	X	X				
-Hours spent at job	X					
-Work on campus		X				
-College program		X[d]	X[d]			
-College grades		X				
-Kids while in college	X					

Notes:

* Significant at the .05 level.

a. Presents significance level only for comparison with students not in college.

b. Reports partial correlations between college type and attainment of a baccalaureate for five racial-ethnic groups. The correlations for community college entrants range from -0.20 to 0.01. The correlations for four-year college entrants range from -0.01 to 0.08. See discussion in text.

c. The sample included only those aspiring to a baccalaureate degree.

d. The sample included only those students in the academic program.

Table 2
ECONOMIC ATTAINMENT OF ENTRANTS TO TWO-YEAR COLLEGES, FOUR-YEAR COLLEGES, AND POSTSECONDARY VOCATIONAL SCHOOLS

	Monk-Turner (1983)	Anderson (1984)	Brenneman, Nelson (1981)	Wilms (1980)	Somers et al. (1971)
STUDY CHARACTERISTICS					
Data set used	NLSME	NLS-72	NLS-72	own	own
Year students entered college	1966,1968	1972	1972	1973	
Year students graduated college					1966
Year students followed up	1976,1977	1979	1976	1976	1969
Type of students studied	Acad,Voc	Acad	Acad,Voc	Voc	Voc
Occupational scale used	Duncan (1-96)	Duncan (1-96)	Duncan (1-999)		NORC (1-90)
FINDINGS					
Mean Status of Current Occupation					
Four-year college					
public and private	61.1		486		
state college only		NA			
Two-year college					
public	49.3	NA	424		
community college					49.0
postsec. voc. school					42.9
Difference in status					
no controls	11.8	NA	62.0		6.1
with controls	3.5*	2.4*	NA*		NA
Mean Earnings in Current Job					
Four-year colleges					
public and private			$142[a]		
state college only		NA			
Two-year colleges					
public		NA	$159[a]		
community college				NA[b]	$3.20[c]
postsec. voc. school				NA[b]	$2.70[c]
Difference in earning					
no controls		NA	-$17[a]	NA	$0.50[c]
with controls		-$0.05	NA	NA*	$0.29*
Unemployment Rate					
Four-year (all)			8.8%[d]		
Two-year					
public only			7.7%[d]		
community college					3.3%[e]
postsec. voc. school					7.7%[e]
Difference in unemployment rate					
no controls			1.1%[d]		-4.4%[e]
with controls			0.5%[d]		NA

Source: Dougherty (1987; and forthcoming)

	Monk-Turner (1983)	Anderson (1984)	Breneman, Nelson (1981)	Wilms (1981)	Somers et al. (1971)
CONTROL VARIABLES					
Social background					
-Sex	X	X		X	X
-Race	X	X	X		X
-SES	X	X	X[f,g]	X	X
-Age				X	X
-Language spoken at home			X		
-Religion		X			
-Location of home	X				X
-Size of hometown	X		X[h]		X
-Marital status	X		X		X
-Any children			X[g]		
-Living arrangements			X[f,g]		
Aspirations					
-Student's educ. asps.	X	X	X		
-Students' occ. asps.		X			
-Parents' educ. asps.		X			
-Student's perception of college ability		X			
High School Record					
-Test scores	X	X			
-Grades or class rank		X	X		
-Curriculum or track		X	X[f,g]		
-Changed high schools			X[h]		
-Location of high school			X		
-Hours spent at H.S. job			X		
Early College Experiences					
-Enrollment status (FT/PT)			X[f,g]		
-College program		X	X[f,g]		X
Educational Attainment	X			X	X
Job-relatedness of educ.					X
Occupational Traits					
-Yrs. since enrolled FT			X		
-Yrs. at current job	X		X[g]	X	
-Occupational status			X[g]		
-Hrs. worked per week	X		X[g]	X	
-Number of employees respondent supervises			X[f,g]		
-Number employees in firm			X[f,g]		
-Number employees in office			X[f,g]		
-Attitudes toward work			X[h]		
-Size of city living in October 1976			X[g,h]		

Notes:

* Significant at the .05 level.

a. Weekly wages.

b. Figures are for first job. Current job figures are not reported.

c. Hourly wages.

d. Percentage of last year that respondent was unemployed.

e. Whether unemployed last year.

f. Variable was used in occupational-status equation (equation 3). In some cases, variable was not in final version of equation because not significant at p 0.05.

g. Variable was used in earnings equation. In some cases, variable was not in final version of equation because not significant at p 0.05.

h. Variable was used in unemployment equation. In some cases, variable was not in final version of equation because not significant at p 0.05.

Community college baccalaureate aspirants are less successful than their four-year college peers for several reasons that we can cluster within three main factors:[3]

1. higher attrition in the lower division resulting from community colleges' weaker academic integration of their students due to a lack of dormitories and a student and faculty culture of lowered academic expectations.

2. lesser continuation into the upper division due to the community colleges' strongly vocational orientation, the scarcity of financial aid for transfers, and the simple fact that movement to the upper division requires movement to a new and unfamiliar school.

3. higher attrition in the upper division due to loss of credits in transfer, lack of financial aid, poorer social integration into the four-year college, and poorer preparation for upper-division work.

The bleak finding that community college hinders the success of its baccalaureate aspirants is balanced by the fact that it seems to aid the attainment of its nonbaccalaureate aspirants. Students who want less than a baccalaureate degree — whether an associate's degree or a vocational certficate — seem to get more years of education if they enter a community college than if they enter a four-year school (Dougherty, 1987; and forthcoming).

Still, this leaves us with the problem of how do we help the one-third to one-half of community college students who would do better starting at a four-year college? It is to that question that I turn.[4]

---

3. These factors are explored at length in Dougherty (1987; and forthcoming).

4. Another important question, of course, is whether this effect is intentional, as some claim. I address this question — which involves analyzing the origins of the community college and occupational education — elsewhere (Dougherty, 1988a,b; and forthcoming).

RFFORMING THE COMMUNITY COLLEGE

The question of how to improve the community college's baccalaureate preparation and transfer capacity has been addressed by many community college observers and students. Their recommendations vary considerably, but we can identify two sets of proposals. One would change the community college's internal operations and relationships with four-year colleges, but would leave its present structure largely intact. We can call this camp "nonstructural reform." Among the most notable contributors to this reform program are the recent Ford Foundation-sponsored studies of Arthur Cohen and Florence Brawer (1987) and Richard Richardson and Louis Bender (1987). The second camp set of reform proposals we can term "structural reform." It argues that the community college must be fundamentally changed in its very structure, because that structure — and not how the community college operates — is the real source of the problem.

I will argue that both sets of proposals are important. Ultimately the structural reforms are likely most reduce the hurdles that baccalaureate aspirants encounter at the community college. But those institutional reforms are also less likely politically and may encounter significant side effects of their own. Hence, we also need to pursue the nonstructural reforms. In short, both sets of reforms can be seen as the short-term and long-term components of a strategy of making the community college truly serve the aspirations of all its students.

NONSTRUCTURAL REFORM

Those community college scholars and observers who focus on changing the community college's operations and relationship with the four-year colleges have advanced a host of recommendations. For reasons of clarity, I will organize them according to the three main obstacles to baccalaureate aspirants' success that I discussed above: attrition in the lower division; difficulty transferring to the upper division; and attrition in the upper division.

Reducing Attrition in the Lower-Division

Community college entrants are more likely to leave college than four-year college entrants. This is partly due to student characteristics: community college entrants on the average have lower aspirations and academic aptitude than four-year college entrants. Hence, many community-college reformers have argued that community colleges must improve their remediation efforts. These suggestions are summarized in Table 3 and discussed below.

1. More personal and extensive tutoring: Community college observers frequently note that community colleges do provide more extensive tutoring programs than do four-year colleges. But these programs often rely heavily on mechanical tutoring (for example, by computer), whereas in person tutoring seems

Table 3
REDUCING ATTRITION IN THE LOWER DIVISION: REMEDIAL EDUCATION

1. more personal and extensive tutoring: less use of mechanical tutoring (for example, by computer) and making it mandatory rather than simply suggested to students in need.

2. developing new kinds of remedial courses: courses that are coupled with regular academic courses; courses that have academic content but do not require advanced skills; courses halfway between regualr remedial program and mainstream academic program.

3. setting limits on how long can take to correct deficiencies, so as to maintain pressure to remedy deficiencies.

more effective. Moreover, because of limited resources, community colleges do not try to bring in all students who could benefit from tutoring but rather make it advisory rather mandatory (Cohen and Brawer, 1987: 133-135, 139-140, 145; and Richardson and Bender, 1987: 39, 68-69, 209).

2. Developing new kinds of remedial courses. The effectiveness of remedial courses could be enhanced if more courses were coupled with regular academic courses; if remedial courses were devised that have academic content but do not require advanced skills, thus allowing students to make visiable academic progress but without making undue demands on their still developing academic skills; and finally, devising courses that would ease the transition between the regular remedial program and mainstream academic program (Richardson and Bender, 1987: 58-59).

3. Setting limits on how long can take to correct deficiencies. Many students drift along in remedial education programs without making an effort to move into the regular academic program. Hence, in order to provide a stimulus to move into the mainstream and to conserve on institutional resources, it has been suggested that a limit be set — the suggestion is two semesters — on how long they can be in remedial education. There is evidence that if students have not corrected their academic deficiencies within this timne, it is very unlikely they will succeed in the regular academic program (Richardson and Bender, 1987: 59).

Community college reformers also argue that community colleges must find ways of "warming up" the low aspirations of their students. Zwerling (1976: 186-199) has recommended the freshman Educational Development Seminar at what was Staten Island (N.Y) Community College as just such a means of raising students' expectations. Its main tool was to have students develop detailed educational

and life plans, determine the main obstacles they would encounter, and analyze how to go around them.

But community college entrants do not fall behind their four-year college peers solely because of their lesser aptitudes and aspirations. Even when their hopes and skills are comparable, community college entrants succeed less well. This points us to the impact not of student characteristics but of such institutional characteristics as the less academic institutional culture of the community college and its poorer academic and social integration of its students. Because they are less selective, community colleges are characterized by weaker student and faculty expectations that students will be successful academically. Moreover, because they are not residential colleges, community college are less able to insulate their students from the distractions of job and home life (Cohen and Brawer, 1987: 100, 182; Dougherty, 1987: 94-96).[5] The various steps suggested to allow community colleges to approximate the tighter social and academic integration of four-year colleges, especially four-year colleges, are summarized in Table 4 and discussed below.

5. See Tinto (1987) for a theoretical and empirical analysis of the concepts of academic and social integration into college.

Table 4
REDUCING ATTRITION IN THE LOWER DIVISION:
GREATER ACADEMIC AND SOCIAL INTEGRATION

1. encouraging more faculty/student interaction outside class.

2. integrating student jobs into the academic life: providing more jobs; and providing outside jobs in the form of paid internships

3. encouraging the formation of clubs.

4. scheduling students together in blocks of classes so that they are more likely to make friends on campus.

1. Encouraging faculty/student interaction outside class. Faculty academic values are most likely to shape the culture of a college to the extent faculty influence students not just in class but also out of class (Astin, 1977a,b; Cohen and Brawer, 1987: 182).

2. Integrating student work into the academic life. Students' outside jobs absorb their attention and time and may lead them to leave college entirely. Colleges can try to neutralize this competing effect by providing more jobs on campus and by academicizing outside jobs in the form of paid internships (Astin, 1977a,b; Cohen and Brawer, 1987: 182).

One of the most powerful forces binding students to their college is their ties to other students. These ties to each other can be fostered by the following:

3. encouraging the formation of clubs (Cohen and Brawer, 1987: 182); and

4. scheduling the same students together in blocks of classes (Cohen and Brawer, 1987: 182)

Increasing the Transfer Rate

If they survive their first or second year at the community college, baccalaureate aspirants then must leap over the chasm lying between them and the four-year college. This chasm is made deep by at least three factors: the simple fact that leaping to the upper division requires movement to a new and unfamiliar school; the dearth of financial aid for transfer students; and the community colleges' strongly vocational orientation and, consequently, their weak efforts to encourage transfer education (Bernstein, 1986: 37; Cohen and Brawer, 1987: 81-83, 131; Dougherty, 1987: 96-97; Richardson and Bender, 1987: 40, 152, 160, 181, 205; and Zwerling, 1976: 229, 237-238).

Under the rubric of transfer articulation, great attention has been given to how students may be helped in jumping across this moat. This has been the major

concern of the Urban Community College Transfer Opportunity Program, a research and demonstration project that the Ford Foundation has sponsored for several years (Center for the Study of Community Colleges, 1988). The main suggestions proposed involve better advising, familiarizing potential transfers with the four-year colleges, providing more financial aid, giving more transfer credit to vocational-education courses, and reducing the community college's emphasis on vocational education. These suggestions are summarized in Table 5 and addressed below.

1. Better transfer advising. This would include early, proactive identification of potential transfers, rather than waiting for them to announce themselves. To heighten student awareness, they should be exposed to more extensive, attractive, and up-to-date information about transfer opportunities rather than the often desultory publicity made by many community colleges today. Finally, faculty knowledge about transfer requirements and who the potential transfers are should be fanned, and faculty should be encouraged to discuss transfer with their advisees, rather than seeing that as the responsibility of the counseling staff (Cohen and Brawer, 1987: 180-181; Richardson and Bender, 1987: 181-183, 209-213; and Zwerling, 1976).

2. Familiarizing potential transfer students with the four-year colleges.

Table 5
INCREASING THE TRANSFER RATE

1. Better transfer advising.
2. Familiarizing potential transfer students with the four-year colleges.
3. More financial aid targetted to transfer students' needs.
4. Making it easier to transfer vocational credits to the four-year college.
5. Less emphasis on vocational education.

In order to overcome students' fear of the chasm lying between the community college and four-year colleges, it is useful to have them experience four-year college life in advance. This can be done by having them visit four-year colleges (Zwerling, 1976) and by having four-year college faculty and staff teach courses and lead programs at the community college (Richardson and Bender, 1987: 210).

3. More financial aid targetted to transfer students' needs. Financial aid should be increased and more quickly respond to transfer students chaning needs. Usually in transferring from a community college to a four-year college, students' tuition and living expenses go up sharply and student aid must change in tandem (Richardson and Bender, 1987: 209-210, 219).

4. Making it easier to transfer vocational credits to the four-year college. It is increasingly common for community-college vocational students to be able to transfer, applying their vocational-education credits toward four-year degree programs. The most formalized example of this are "capstone programs," where vocational-education courses are credited against a major in a technical field and the bulk of a students' upper-division course load will be in meeting the four-year college's general education requirements. However, a problem with such programs is that, once established, they are not infrequently redirected to favor four-year college freshmen rather than community-college transfers (Richardson and Bender, 1987: 108-109, 173-174).

5. Less emphasis on vocational education (Richardson and Bender, 1987: 205). Despite efforts to ease the transfer of vocational credits, vocational-education students will undoubtedly remain less likely to attain baccalaureate degrees. Even in states such as California where many vocational-education students transfer to four-year colleges, community colleges with strong vocational

programs have lower transfer rates than those with weaker ones (California Community Colleges, 1984: 17-19; Villa, 1981: 12). This argues for lessening the community college's vocational orientation, a policy made more attractive by evidence that in many fields community colleges are producing more vocational-education graduates than the economy can absorb (Grubb, 1984; Mitchell, 1986; and Pincus, 1980: 348).

Post-transfer Attrition

Even after they transfer, community college students still encounter obstacles that are traceable to their having entered a community college first. They lose credits in transfer, lack financial aid, find it difficult to integrate themselves socially into the four-year college, and find themselves poorly prepared for upper-division work (Bernstein, 1986: 36-38; Cohen and Brawer, 1987: 85; Dougherty, 1987: 97-99; Richardson and Bender, 1987: 27-28, 36, 40, 43-48, 56-57, 80-83, 148, 161).

The four main suggestions that have been offered to these problems are summarized in Table 6 and explicated below.

1. Greater acceptance of credits. A major factor slowing down students in

Table 6
REDUCING POST-TRANSFER ATTRITION

1. Greater acceptance of credits: more acceptance of vocational credits; better transferrability of general education credits; making the associate's degree sufficient for junior-level standing.

2. Better social integration of transfer students into the four-year college through special orientation programs.

3. Providing more financial aid for transfer students.

4. Better pretransfer academic preparation: closer parallelism between university and community college standards; more rigorous curricula and standards; entry and exit testing for transfer programs; and stricter sequencing of courses.

their attainment of a bacclaureate degree is loss of credits in transfer, with this delay putting students at greater risk not to finish. This loss occurs either in the form of not giving university credit for community college courses or, more insidiously, giving university but not departamental (major) credit (Bernstein, 1986: 38; Cohen and Brawer, 1987: 179-180; Dougherty, 1987: 97; Richardson and Bender, 1987: 80). A variety of proposals have been made to reduce this loss of credit: better informing community college faculty and counselors about university rules; clearly identifying (through course titles and numbers) which courses are transferrable; accepting more vocational-education credits; treating credits in approved general education courses as meeting university general education requirements; making the associate's degree sufficient for junior-level standing; and establishing "upper division" (junior and senior year) colleges oriented to accepting community college transfers (Cohen and Brawer, 1987: 160-161, 179-180; Richardson and Bender, 1987: 169-170, 184, 210-218; Willingham, 1972: 40).[6]

2. Providing more financial aid for transfer students. Transfer students often do not receive aid, so the most important step is to provide more aid. But even if they do receive aid, they still run into problems. Transfer students are often classified as new students at a university and thus get lower priority than renewals. Even if they have already been receiving aid before transfer, mid-year transfers often find that their aid is not increased to take into account rising tuition and living expenses as they move from their fall semester at the community college to their spring semester at the university (Richardson and Bender, 1987: 56-57, 112).

6. The upper division colleges may be an only temporary solution, however. Nearly one-half of their entrants are from four-year colleges (Kintzer and Wattenbarger, 1985: 40).

3. Better social integration of transfer students. Better student aid helps integration by lessening students' need to work to pay their bills, thus affording more time for campus activities. In addition, transfer students benefit from the provision of orientation programs solely directed to them, rather than being lumped with freshmen and other new students (Richardson and Bender, 1987: 147, 213).

4. Better pretransfer academic preparation. Contrary to most claims, "grade shock" is not a minor and transitory experience for transfers as they encounter stiffer standards at the university. Rather it stops or slows many students' pursuit of the baccalaureate (Dougherty, 1987: 99). Poorer preparation and lower standards in the community college play an important role in producing grade shock (Bernstein, 1986: 36-38; Dougherty, 1987: 99; Richardson and Bender, 1987: 27-28, 36, 43, 46-48).

Several proposals have been made to improve transfers' lower-division preparation. Closer parallelism between university and community college standards can be fostered through greater interchange between university and community college faculty. Moreover, potential transfer students should be warned that university work will be tougher, requiring more self-directed work, and they should have spelled out the specific competencies that universities expect. This warning should be backed up by requiring more intensive reading and writing in transfer courses, tougher grading, and allowing entry into and exit from transfer programs only if students pass entry and exit exams. (Cohen and Brawer, 1987: 19, 181; Richardson and Bender, 1987: 207-209). Clearly, these proposals for tighter standards must be coupled with careful and energetic efforts to provide remedial education so that students are enabled to meet the standards, if unable to at first.[7]

APPRAISING THE NONSTRUCTURAL REFORM PROGRAM

The nonstructural reform program includes many policy changes that are are worth pursuing. They will help remove the obstacles that community college entrance puts to the ambitions of baccalaurete aspirants. Moreover, given the now entrenched position of the community college, the nonstructural reforms are more politically feasible than are more sweeping changes.

Nonetheless, the nonstructural reforms need to be supplemented by more the sweeping changes that I have termed structural reform. The nonstructural reforms do not change the essential features of the the community college: as a vocationally oriented, two-year, commuter institution that is structurally separate from the four-year colleges that transfer students must eventually enter. Yet, these features powerfully press community-college entrants toward higher dropout rates, lower transfer rates, and difficulty in adjusting to post-transfer university work. This structural thrust will be mitigated, but not eliminated, by the nonstructural reforms. As long as community colleges are vocationally oriented institutions they are unlikely to adequately publicize transfer opportunities and prepare their students for them. As long as they are commuter institutions, they will always have difficulty integrating their students socially and academically and thus will run higher attrition rates than the more residentially oriented four-year colleges. And as long as they are two-year institutions that are structurally separate from four-year colleges, community colleges will always have difficulty getting their students post-transfer financial aid and full credit for their community college courses.[8]

7. The early experience with minimum competency testing of high school students provides ample warning of the dangers of exit testing that is not fully backed up with remedial education. Without such backup, these higher standards fall heavily on working class and nonwhite students, the very constituency the community college is supposed to be particularly attentive to.

STRUCTURAL REFORM

The structural reform program recognizes that the obstacles encountered by community college baccalaureate aspirants lie not just in how community colleges operate but also ir how they are are fundamentally organized. At the same time, the structural-reform program tends to ignore changes that can be made in the relatively short-term to improve the community college's contribution to its baccalaureate aspirants' success. Three main proposals have been made for changing the community college's very structure: ending its comprehensive nature; converting community colleges into two-year university branches; and transforming community colleges into four-year colleges. Let us review the case made for each and the objections that they encounter.

Ending the Comprehensive Community College

As a comprehensive institution, the community college tries to serve at least four student intents: baccalaureate preparation; vocational preparation; general education; and remedial education. Given the difficulty of reconciling these educational goals, a problem the community college shares with the comprehesive high school (Labaree, 1989), it is frequently suggested that community colleges drop their transfer program, becoming essentially vocational institutions on the order of the vocational-technical systems found in states such as Indiana, South Carolina, or Wisconsin.

This proposal encounters a major, and in my mind, fatal objection. Entirely

8. The community colleges' distinguishing features appear, although less commonly, in four-year colleges, and here too they cause much the same effects. Four-year commuter colleges tend to have higher dropout rates than do four-year residential colleges (Anderson, 1981: 12; Astin, 1977a: 109, 217; 1977b: 91-92, 165-168; and Velez, 1985: 196-197). And vocationally oriented colleges, whether four-year or two-year, have lower baccalaureate-completion rates than do less vocational colleges (Anderson, 1984: 33-34).

vocational two-year institutions make it hard for students to transfer to four-year colleges, since they typically have weak liberal arts programs. Hence, once in such schools, students are very unlikely to be able to switch to pursuing a baccalaureate degree. They will not have credits that most universities would recognize and they are unlikely to encounter anyone who would encourage them to think of getting a baccalaureate degree.[9]

Entirely academic two-year institutions, such as the University of Wisconsin Center System, run a similar, but opposite, harm. They make it hard for a student to decide to move in a vocational direction. Moreover, a system of entirely academic two-year institutions usually prompts the formation of a parallel system of vocational-technical institutes, as has happened in Wisconsin, with these vocational schools encountering the problem mentioned above for entirely vocational schools.

In both cases, we rediscover the logic of comprehensive schooling, one that has dominated the history not only of American secondary education but also of much of American higher education (Labaree, 1989). But are there comprehensive institutions that are yet different from the present community college?

---

9. Such factors underly the finding that community college students are much more likely to go on to get a baccalaureate degree than are entrants to vocational-technical schools. For example, focusing on baccalaureate aspirants, Nunley and Brenaman (1988: 80-81) found that community-college entrants received 31% more bachelor's degrees and 0.88 years of education than vocational-technical school entrants, even with extensive controls for socioeconomic background and academic aptitude.

Converting Community Colleges into Branches of the State Universities

The free-standing two-year college has become the norm in most states. But although ignored, other structures for two-year education also exist. One of these is the systems of two-year branches of the state universities that are found in several states: Alaska, Connecticut, Hawaii, Kentucky, Louisiana, New Mexico, Ohio, Pennsylvania, and South Carolina. In some states (such as Connecticut), these university branches are essentially academic institutions. But in other states (Alaska, Hawaii, Kentucky, and New Mexico), the two-year branches are little different in curriculum and admissions policy from the typical community college and in fact go by that name.[10]

University branch system have many advantages. Transfer is easier and more common. Univerity branches confront their baccalaureate aspirants with a smaller chasm between the lower and upper divisions. Branch students are not treated as outsiders, but as members of the university, with movement to the central campus typically being a matter of changing campuses rather than applying for admission. As a result, application for transfer is very simple. And there is little trouble in securing post-transfer financial aid since they are part of the university-wide student-aid system (New Mexico State Commission on Postsecondary Education, 1986: 31; South Carolina Commission on Higher Education, 1979: 54; and University of Connecticut, 1987).

Trent and Medsker (1968) provide fragmentary evidence for this transfer advantage for university-branch students. They found that, among students

10. For example, the proportion of two-year branch enrollments in vocational-technical programs stands at 39% in Alaska (fall 1986 FTEs), 47% in Hawaii (fall 1983 headcount), 40% in Kentucky (fall 1986 FTEs), and 39% in New Mexico (1979-1980 FTEs) (Hauselman and Tudor, 1987: 29; New Mexico State Board of Education Finance, 1980: 26; Polk, 1984: 31; and University of Alaska, 1987: 20-31)

entering college in fall 1959, 54% of the extension center students, but only 42% of the community college students, had transferred to four-year colleges by June 1963 (Trent and Medsker, 1968: 85).[11]

Moreover, after transfer, extension-center students seem to encounter fewer difficulties than do community-college entrants. They are more likely to receive financial aid. They are much less likely to lose credits, since the parent universities are committed to accepting their credits.[12] This is made easy by the several features of the curriculum at the braches. Often the parent campus must give approval to those courses (New Mexico State Board of Educational Finance, 1980: 3). Moreover, branch courses often have the same content and course numbers as central campus lower-division courses. And center faculty are typically appointed by the central administration and are often members of university-wide departments (Alaska State Commission on Postsecondary Education, 1981: 4, 8; New Mexico State Board of Educational Finance, 1980: 3). All of these features also insure, of course, that lower-division academic preparation in the branches is more attuned to the demands of upper-division courses.

The idea of two-year branches is not without its problems, however. Critics have raised the possibility that, because of their closer ties to the universities, extension centers will be less innovative, locally oriented,

11. These data clearly are only indicative rather than conclusive. No doubt this transfer gap in part reflects differences in the average family background, high school record, and educational and occupational aspirations of community-college and extension-center entrants.

12. This does not preclude hitches, however. Transfers from the University of Alaska's community colleges to its four-year campuses have found that, while their community college credits are fully accepted toward the total needed for a baccalaureate, they often do not receive full credit for courses in their major (Alaska State Commission on Postsecondary Education, 1985: 107).

receptive to open admissions, and willing to offer nontraditional education (vocational, remedial, and adult) than are community colleges (Beckes, 1964; and Medsker, 1960). Defenders of the university branches respond that university branches may actually do a better job of providing vocational and adult education, especially of a more advanced content, and that a local orientation is not that important in an age where strictly local labor markets no longer exist (Holderman, 1964). This still leaves the question of whether university branches are less likely to favor vocational education and open admissions. This may be true, but there are important exceptions. Several branch systems — such as those of Alaska, Hawaii, Kentucky, and New Mexico — are explicitly committed to open admissions and strong vocational programs (Hauselman and Tudor, 1987: 1-2; New Mexico State Board of Educational Finance, 1980: 3; Polk, 1984: 8; University of Alaska, 1981: 18-23; and University of Hawaii, 1986).

But even if vocational education were to recede, this might not necessarily be bad. There is evidence that community colleges stress vocational education too much, producing more vocational-education graduates than the economy demands (Grubb, 1984). In Washington State, for example, the community college systems trains large number of people in several traditional occupations in which the supply of vocational graduates exceeds the demand by at least 200%: auto mechanics, diesel engine repair, computer programming and analysis, food production, welding, and electrical and electronic technology. In fact, in food production, the community college system alone graduates three times as many people as the field needs (Mitchell, 1986). This overproduction of vocational graduates is also evidenced by the repeated finding that on average only about 50 to 60% of community college vocational graduates find jobs directly related to their training (Pincus, 1980: 348).

Despite its attractions, the conversion of community colleges into

university branches may not thoroughly address the structural impediments to the success of baccalaureate aspirants entering the community college. The process of transferring from a branch to the central campus would still be subject to considerable obstacles. The process of transferring will still require moving to a new institution and integrating oneself into it. Hence, some have argued for going further: converting the larger community colleges into four-year colleges.

Converting Community Colleges into Four-Year Colleges

Zwerling (1976: 251-252), among others, has explicitly recommended that community colleges be turned into four-year schools. This is a highly controversial recommendation, one that has been explicitly denounced by many commentators on the community college, ranging from Burton Clark (1980: 23) to the Carnegie Commission on Higher Education (1970). Yet, it merits careful consideration.

By becoming four-year colleges, community colleges make it very easy for students to move between the divisions, taking their credits and financial aid with them. Vocational-education courses are more likely to be creditable toward a baccalaureate degree. Lower-division academic preparation is more attuned to the demands of upper-division courses because faculty in the two divisions are in closer communication, and in most cases are one and the same. And students are better integrated socially, since they are continuing in the same institution.

Yet, there are powerful objections to this proposal One clear problem with the proposal above is that many community colleges are too small to be turned into efficient and effective four-year colleges. This objection could be met by restricting this conversion only to community colleges above a certain size, say 1000 or 2000 students, and converting smaller ones into two-year branches of the state universities.

A second obvious objection is that converting even the larger community

colleges into four-year colleges would be horrendously expensive, requiring major new expenditures to hire liberal arts faculty and stock libraries. But it is not clear that, especially in the case of the larger community colleges, whether this would be such a problem. Most have well-stocked libraries and have, if anything, a surplus of liberal arts faculty eager to teach traditional four-year-college courses.

But, the question might be raised, would the newly minted four-year colleges be content to remain four-year colleges or would they push to develop graduate programs, following the well-worn path trod by the teachers' colleges? This is a danger, but it is not clear that it cannot be turned back by a firmness of will. After all, through such firmness, states have allowed few of the many community colleges wanting to become four-year colleges from realizing their wish.

The very eagerness of many community college faculty to teach four-year college courses frightens many community-college supporters. They fear that, once they become four-year institutions, community colleges will lose their interest in two-year programs, especially vocational education (Clark, 1980: 23). In truth, vocational programs will probably recede, although it may be much less than many people assume, if we look at the many urban four-year colleges that have maintained strong vocational programs. But even if a decline in vocational enrollments occurs, this may not be a bad thing. As noted above, there is reason to believe that community colleges stress vocational education too much, producing more vocational-education graduates than the market can absorb and seducing too many baccalaureate aspirants away from their original plans.

Another objection to structurally transforming the community college is that it will not change its position in the higher education prestige hierarchy: at the bottom (Karabel, 1972: 557). This objection ignores the fact that students are judged as much by their degree as where it comes from. If as hoped,

four-year community colleges sharply increase their number of baccalaureate graduates, this will produce a sharp net increase in the prestige of its students and, ultimately, of the college itself. In fact, while four-year community colleges will not shoot to the top or even middle of the prestige hierarchy, they will probably move up rather sharply. A four-year Miami-Dade or Los Angeles or Chicago community college would probably move ahead of many longstanding four-year colleges, for there are many four-year colleges of low prestige.

The two previous points raise a final objection: won't the multiplication of four-year colleges unduly increase the number of baccalaureates, thus fueling educational inflation and overeducation (Clark, 1980; and Karabel, 1972: 557)? This concern has validity in that our educational system has been recurrently subject to problems of educational inflation and overeducation (Collins, 1979; and Freeman, 1976). But at the same time, if there is a scarcity of good, "college level" jobs, is it indeed best to ration them by reducing the demand (by having many students be diverted into subbaccalaureate degrees)? Or would it not be better to explicitly confront the excess of demand over supply by forcing employers to have to turn down applicants with baccalaureates. I would argue that the latter path is actually preferable. Even if baccalaureates are unable to get a college-level job, they have gained much in cultural and political sophistication. Moreover, by making evident the shortage of good jobs it makes it more likely that we will move to increase the number of such jobs (Zwerling, 1976: 252-255).

At this point, we move beyond the confines of educational reform, albeit structurally oriented, to social reform more generally. Community colleges, like all other educational institutions, face a persistent dilemma: how to encourage student ambition, while recognizing the structural limits to its realization. Ambition must be encouraged widely in order to enhance social mobility and thus

reconcile people to the fact of social inequality. But the demand for professional and managerial jobs is greater than their current supply, raising the problem of disappointment and even anger. In the United States, a major solution to this problem of disappointed expectations has been what Burton Clark (1960, 1980) has called the "cooling out" process in education: guiding students' expectations so that many students take themselves out of competition for the best jobs, thus reducing the number of such jobs demanded to one closer to what the economy can supply. What this misses is that there is no absolutely fixed number of college-level jobs in an economy (Zwerling, 1976: 252). There may be a limited number of good jobs within our current economic system, which relies on a steep hierarchy of authority in which power, responsibility, and job satisfaction are concentrated toward the top (Wright, 1986). But different economic structures are possible, ones that redistribute power, responsibility, and job satisfaction so as to create many more jobs requiring college-level skills. These economic structures go by such names as economic democracy, workers' control, and collectivist-participatory work. At their core, they involve having workers share in the task not only of directly producing goods and services, but also managing and even owning the firms within which they work. These multivalent jobs would benefit greatly from the outlook and skills that a baccalaureate education inculcates in students (Carnoy and Shearer, 1980; Rothschild and Whitt, 1986; and Zwerdling, 1980).

CONCLUSION

The community college is a complicated institution, meeting many purposes and serving many different kinds of students. Hence, it should not be surprising that, although it may serve some purposes and students well, it may not do so well with others. Even as it seems to meet the needs of most students interested in vocational and adult education, it hinders the educational and economic success of baccalaureate oriented students.

The question then is how to address this problem. Many excellent suggestions have been made for how the community college operates with respect to such things as enhancing students' academic and social integration into college life, providing remedial education, strengthening transfer advising, and preparing students for upper-division courses. But these worthwhile reforms in how the community college operates are partially vitiated by the fact that the obstacles encountered by community college entrants with baccalaureate aspirations flow from the community college's structure: that it is a vocationally oriented, two-year, commuter institution that is structurally separate from the four-year colleges that its baccalaurate aspirants must eventually transfer to. Hence, we have reviewed suggestions for changes in the community college's very structure: most notably, converting them into branches of the state universities or transforming the larger community colleges into four-year colleges.

These structural reforms, especially converting the larger community colleges into four-year colleges, are likely to be controversial. Hence, we may want to think of a hierarchy of reforms. We should at the very least try to implement the nonstructural reforms, for they promise to bring significant and relatively immediate benefits and they are likely to be fairly uncontroversial. However, we should also move to bring community colleges under the aegis of the

universities in order to overcome the institutional divisions that will still remain if the nonstructural reforms are implemented. Then, if circumstances allow, we should move to convert many of the community colleges into four-year colleges in order to eliminate structural impediments that afflict even the two-year branches. In all these changes, it is important that we preserve the comprehensive nature of the community college, whatever its structural reincarnation. Too many students want and would benefit from vocational education for us to simply eliminate it. However, it would be beneficial if the community college were to become less vocationally driven than it now is.

REFERENCES

Alaska State Commission on Postsecondary Education. 1981. Community Colleges: A Report to the Twelfth Alaska State Legislature by the Community College Interim Committee. Volume 1. Juneau: the Commission. (ERIC ED 213 462)

_____. 1985. Alaska Postsecondary Education, 1986-1990: A Statewide Plan. Juneau: the Commission. (ERIC ED 265 898)

Alba, Richard and David Lavin. 1981. "Community Colleges and Tracking in Higher Education." Sociology of Education 54: 223-247.

Anderson, Kristine. 1981. "Post-High School Experiences and College Attrition." Sociology of Education 54: 1-15.

_____. 1984. Institutional Differences in College Effects. Boca Raton, FL: Florida Atlantic University. (ERIC ED 256 204)

Astin, Alexander. 1977a. Four Critical Years. San Francisco: Jossey-Bass.

_____. 1977b. Preventing Students from Dropping Out. San Francisco: Jossey-Bass.

_____. 1982. Minorities in Higher Education. San Francisco: Jossey-Bass.

Beckes, Isaac. 1964. "The Case for Community Junior Colleges." Junior College Journal 34 (April): 24, 26-28.

Bernstein, Alison. 1986. "The Devaluation of Transfer." Pp. 31-40 in L. Steven Zwerling (ed.), The Community College and Its Critics. (New Directions for Community Colleges 54.) San Francisco: Jossey-Bass. (ERIC ED 271 169)

Breneman, David W. and Susan C. Nelson. 1981. Financing Community Colleges. Washington, D.C.: Brookings Institution.

California Community Colleges. 1984. Transfer Education. Sacramento: Office of the Chancellor. (ERIC ED 250 025)

Carnegie Commission on Higher Education. 1970. The Open Door Colleges. New York: McGraw-Hill.

Carnoy, Martin and Derek Shearer. 1980. Economic Democracy. White Plains, NY: M.E. Sharpe.

Center for the Study of Community Colleges. 1988. An Assessment of the Urban Community Colleges Transfer Awards. Final Report. Los Angeles: University of California. (ERIC ED 293 573)

Clark, Burton. 1960. "The Cooling Out Function in American Higher Education." American Sociological Review XX

_____. 1980. "The 'Cooling Out' Function Revisited." Pp. 15-31 in George Vaughan (ed.), Questioning the Community College Role. (New Directions for Community Colleges XX). San Francisco: Jossey-Bass. (ERIC ED XX)

Cohen, Arthur M. and Florence Brawer. 1987. The Collegiate Function of the Community College. San Francisco: Jossey-Bass.

Collins, Randall. 1979. The Credential Society. New York: Academic.

Dougherty, Kevin. 1987. "The Effects of Community Colleges: Aid or Hindrance to Socioeconomic Attainment?" Sociology of Education 60 (April): 86-103.

_____. 1988a. "The Politics of Community College Expansion: Beyond the Functionalist and Class-Reproduction Theories." American Journal of Education 96 (May): 351-393.

_____. 1988b. "Educational Policymaking and the Relative Autonomy of the State: The Case of Occupational Education in the Community College." Sociological Forum 3 (Summer): 400-432.

_____. Forthcoming. Class, Power, and the Community College. Book manuscript, Department of Sociology, Manhattan College.

Freeman, Richard B. 1976. The Overeducated American. New York: Academic.

Godfrey, Eleanor P. and Engin L. Holmstrom. 1970. Study of Community Colleges and Vocational Technical Centers. Washington, D.C.: Bureau of Social Science Research. (ERIC ED 053 718)

Grubb, W. Norton. 1984. "The Bandwagon Once More: Vocational Preparation for High Technology Occupations." Harvard Educational Review 54: 429-451.

_____. 1988. "The Effects of Differentiation on Educational Attainment: The Case of the Community College." Unpublished paper, School of Education, University of California, Berkeley.

Hauselman, A.J. and Dan Tudor. 1987. Compendium of Selected Characteristics: University of Kentucky Community College System, 1986-1987. Lexington, KY: University of Kentucky. (ERIC ED 289 543)

Holderman, Kenneth. 1964. "The Case for University Branch Campuses." Junior College Journal 34 (April): 25, 28-30.

Karabel, Jerome. 1972. "Community Colleges and Social Stratification." Harvard Educational Review 42: 521-562.

_____. 1986. "Community Colleges and Social Stratification in the 1980s." Pp. 13-30 in L. Steven Zwerling (ed.), The Community College and Its Critics. (New Directions for Community Colleges 54.) San Francisco: Jossey-Bass. (ERIC ED 271 169)

Labaree, David. 1989. "From Comprehensive High School to Community College." Unpublished paper, School of Education, Michigan State University.

Medsker, Leland L. 1960. The Junior College. New York: McGraw-Hill.

Medsker, Leland L. and James Trent. 1964. The Influence of Different Types of Public Higher Education Institutions on College Attendance from Varying Socioeconomic and Ability Levels. Berkeley: University of California, Center for the Study of Higher Education. (ERIC ED 002 875)

Mitchell, Myrtle et al. 1986. Change and the Future of Vocational Education. Olympia, WA: Washington State Vocational Directors Council. (ERIC ED 268 284)

Monk-Turner, Elizabeth. 1983. "Sex, Educational Differentiation, and Occupational Status." Sociological Quarterly 24: 393-404.

New Mexico State Board of Educational Finance. 1980. Factbook on New Mexico Public Two-Year Community Colleges and Vocational Schools, 1979-1980. (ERIC ED 198 886)

New Mexico State Commission on Postsecondary Education. 1986. Excellence and Accountability: Report of the Governor's Task Force on Higher Education Reform. Santa Fe: the Commission. (ERIC 272 079)

Nunley, Charlene R. and David W. Breneman. 1988. "Defining and Measuring Quality in Community College Education." Pp. 62-92 in Judith Eaton (ed.), Colleges of Choice. New York: Macmillan.

Pincus, Fred. 1980. "The False Promises of Community Colleges: Class Conflict and Vocational Education." Harvard Educational Review 50: 332-361.

Polk, Barbara. 1984. Hawaii's Community Colleges: New Directions for the 80s. Honolulu: University of Hawaii. (ERIC ED 266 820)

Richardson, Richard and Louis Bender. 1987. Fostering Minority Access and Achievement in Higher Education. San Francisco: Jossey-Bass.

Rothschild, Joyce and J. Allen Whitt. 1986. The Cooperative Workplace. New York: Cambridge University Press.

Somers, Gerald, Laure Sharpe, and Thelma Myint. 1971. The Effectiveness of Vocational and Technical Programs. Madison, WI: University of Wisconsin, Center for Studies in Vocational and Technical Education. (ERIC ED 055 190)

South Carolina Commission on Higher Education. 1979. Policies of South Carolina Senior Colleges and Universities Concerning Transfer from Two-Year Colleges. Columbia: the Commission. (ERIC ED 177 994)

Tinto, Vincent. 1987. Leaving College. Chicago: University of Chicago Press.

Trent, James and Leland L. Medsker. 1968. Beyond High School. San Francisco: Jossey Bass.

University of Alaska. 1987. Statistical Abstract, 1987. Fairbanks: University of Alaska. (ERIC ED 292 437)

University of Hawaii. 1986. Factbook, 1985. University of Hawaii Community Colleges. Honolulu: University of Hawaii. (ERIC ED 266 819)

Velez, William. 1985. "Finishing College: The Effects of College Type." Sociology of Education 58: 191-200.

Villa, Maryamber. 1981. Issues Pertaining to the Transfer Function of the California Community Colleges. Sacramento, CA: Academic Senate for California Community Colleges. (ERIC ED 214 550)

Willingham, Warren. 1972. The Number Two Access Problem. Washington, D.C.: American Association for Higher Education. (ERIC ED 066 140)

Wilms, Wellford. 1980. Vocational Education and Social Mobility. Los Angeles, CA: University of California. (ERIC ED 183 966)

Wright, Erik Olin. 1986. Classes. London: New Left Books.

Zwerdling, David. 1980. Workplace Democracy. New York: Harper and Row.

Zwerling, L. Steven. 1976. Second Best: The Crisis of the Junior College. New York: McGraw-Hill.

Table 1
EDUCATIONAL ATTAINMENT OF ENTRANTS TO TWO-YEAR COLLEGES, FOUR-YEAR COLLEGES, AND POSTSECONDARY VOCATIONAL SCHOOLS

	Nunley-Breneman (1988)	Velez (1985)	Anderson (1984)	Alba-Lavin (1981)	Astin (1982)	Godfrey-Holmstrom (1970)
STUDY CHARACTERISTICS						
Data set used	NLS-72	NLS-72	NLS-72	CUNY	ACE	Own
Year students began college	1972	1972	1972	1970	1971	
Year students left college						1967
Year students followed up	1979	1979	1979	1975	1980	1969
Type of students studied	BA Asps	Acad Prog	Acad Prog	BA Asps	BA Asps	Acad, Voc.
FINDINGS						
% Attaining B.A.						
Four-year colleges						
public and private	NA	79.0%			NA	
public only				31.2%		
state college only			NA			
Two-year colleges						
public and private		31.0%				
public only	NA		NA			
community colleges				12.8%	NA	37.9%
vocational-technical institutes						6.1%
Difference in Percentage						
no controls	NA	48.0%	NA	18.4%	NA	31.8%
with controls	11.5%[a]	18.7%*	13.4%*	11.2%*	NA[b]	NA
Years of Education Attained						
Four-year colleges						
public and private	NA					
state college only			NA			
Two-year colleges						
public	NA		NA			
Difference in Years						
no controls	NA		NA			
with controls	0.1b		0.25*			

Source: Dougherty (1987; and forthcoming)

	Nunley-Breneman (1988)	Velez (1985)	Anderson (1984)	Alba-Lavin (1981)	Astin (1982)	Godfrey-Holmstrom (1970)
CONTROL VARIABLES						
Social background						
-Sex	X	X	X	X	X	
-Race	X	X	X	X	X	
-SES	X	X	X		X	
Age					X	
-Language spoken at home	X	X				
-Religion		X	X			
-Marital status	X					
-Location of home	X					
Aspirations						
-Student's educ. asps.	X[c]	X	X	X[c]	X[c]	
-Student's occ. asps.			X		X	
-Parents' educ. asps.	X	X	X			
-Peers' post-HS plans	X					
-College decision date	X					
-Student's perception of college ability	X		X			
High School Experiences						
-Test scores		X	X		X	
-Grades or class rank	X	X	X	X	X	
-Curriculum or track	X	X	X	X	X	
-Hours spent on homework	X					
-Hours spent at job	X					
-Location of high school	X					
-Racial composition of high school					X	
College Experiences						
-Living arrangements	X	X				
-Hours spent at job	X					
-Work on campus		X				
-College program		X[d]	X[d]			
-College grades		X				
-Kids while in college	X					

Notes:

* Significant at the .05 level.

a. Presents significance level only for comparison with students not in college.

b. Reports partial correlations between college type and attainment of a baccalaureate for five racial-ethnic groups. The correlations for community college entrants range from -0.20 to 0.01. The correlations for four-year college entrants range from -0.01 to 0.08. See discussion in text.

c. The sample included only those aspiring to a baccalaureate degree.

d. The sample included only those students in the academic program.

Table 2
ECONOMIC ATTAINMENT OF ENTRANTS TO TWO-YEAR COLLEGES, FOUR-YEAR COLLEGES, AND POSTSECONDARY VOCATIONAL SCHOOLS

	Monk-Turner (1983)	Anderson (1984)	Breneman, Nelson (1981)	Wilms (1980)	Somers et al. (1971)
STUDY CHARACTERISTICS					
Data set used	NLSLME	NLS-72	NLS-72	own	own
Year students entered college	1966,1968	1972	1972	1973	
Year students graduated college					1966
Year students followed up	1976,1977	1979	1976	1976	1969
Type of students studied	Acad,Voc	Acad	Acad,Voc	Voc	Voc
Occupational scale used	Duncan (1-96)	Duncan (1-96)	Duncan (1-999)		NORC (1-90)
FINDINGS					
Mean Status of Current Occupation					
Four-year college					
public and private	61.1		486		
state college only		NA			
Two-year college					
public	49.3	NA	424		
community college					49.0
postsec. voc. school					42.9
Difference in status					
no controls	11.8	NA	62.0		6.1
with controls	3.5*	2.4*	NA*		NA
Mean Earnings in Current Job					
Four-year colleges					
public and private			$142[a]		
state college only		NA			
Two-year colleges					
public		NA	$159[a]		
community college				NA[b]	$3.20[c]
postsec. voc. school				NA[b]	$2.70[c]
Difference in earning					
no controls		NA	-$17[a]	NA	$0.50[c]
with controls		-$0.05	NA	NA*	$0.29*
Unemployment Rate					
Four-year (all)			8.8%[d]		
Two-year					
public only			7.7%[d]		
community college					3.3%[e]
postsec. voc. school					7.7%[e]
Difference in unemployment rate					
no controls			1.1%[d]		-4.4%[e]
with controls			0.5%[d]		NA

Source: Dougherty (1987; and forthcoming)

	Monk-Turner (1983)	Anderson (1984)	Breneman, Nelson (1981)	Wilms (1981)	Somers et al. (1971)
CONTROL VARIABLES					
Social background					
-Sex	X	X		X	X
-Race	X	X	X		X
-SES	X	X	X[f,g]	X	X
-Age				X	X
-Language spoken at home			X		
-Religion		X			
-Location of home	X				X
-Size of hometown	X		X[h]		X
-Marital status	X				X
-Any children			X[g]		
-Living arrangements			X[f,g]		
Aspirations					
-Student's educ. asps.	X	X	X		
-Students' occ. asps.		X			
-Parents' educ asps.		X			
-Student's perception of college ability		X			
High School Record					
-Test scores	X	X			
-Grades or class rank		X	X		
-Curriculum or track		X	X[f,g]		
-Changed high schools			X[h]		
-Location of high school			X		
-Hours spent at H.S. job			X		
Early College Experiences					
-Enrollment status (FT/PT)			X[f,g]		
-College program		X	X[f,g]		X
Educational Attainment	X			X	X
Job-relatedness of educ.					X
Occupational Traits					
-Yrs. since enrolled FT			X		
-Yrs. at current job	X		X[g]	X	
-Occupational status			X[g]		
-Hrs. worked per week	X		X[g]	X	
-Number of employees respondent supervises			X[f,g]		
-Number employees in firm			X[f,g]		
-Number employees in office			X[f,g]		
-Attitudes toward work			X[h]		
-Size of city living in October 1976			X[g,h]		

Notes:

* Significant at the .05 level.

a. Weekly wages.

b. Figures are for first job. Current job figures are not reported.

c. Hourly wages.

d. Percentage of last year that respondent was unemployed.

e. Whether unemployed last year.

f. Variable was used in occupational-status equation (equation 3). In some cases, variable was not in final version of equation because not significant at p 0.05.

g. Variable was used in earnings equation. In some cases, variable was not in final version of equation because not significant at p 0.05.

h. Variable was used in unemployment equation. In some cases, variable was not in final version of equation because not significant at p 0.05.

Table 3
REDUCING ATTRITION IN THE LOWER DIVISION: REMEDIAL EDUCATION

1. more p[illegible]nal and extensive tutoring: less use of mechanical tutoring (for example, [illegible] computer) and making it mandatory rather than simply suggested to students in need.

2. developing new kinds of remedial courses: courses that are coupled with regular academic courses; courses that have academic content but do not require advanced skills; courses halfway between regualr remedial program and mainstream academic program.

3. setting limits on how long can take to correct deficiencies, so as to maintain pressure to remedy deficiencies.

Table 4
REDUCING ATTRITION IN THE LOWER DIVISION:
GREATER ACADEMIC AND SOCIAL INTEGRATION

1. encouraging more faculty/student interaction outside class.

2. integrating student jobs into the academic life: providing more jobs; and providing outside jobs in the form of paid internships.

3. encouraging the formation of clubs.

4. scheduling students together in blocks of classes so that they are more likely to make friends on campus.

Table 5
INCREASING THE TRANSFER RATE

1. Better transfer advising.

2. Familiarizing potential transfer students with the four-year colleges.

3. More financial aid targetted to transfer students' needs.

4. Making it easier to transfer vocational credits to the four-year college.

5. Less emphasis on vocational education.

Table 6
REDUCING POST-TRANSFER ATTRITION

1. Greater acceptance of credits: more acceptance of vocational credits; better transferrability of general education credits; making the associate's degree sufficient for junior-level standing.

2. Better social integration of transfer students into the four-year college through special orientation programs.

3. Providing more financial aid for transfer students.

4. Better pretransfer academic preparation: closer parallelism between university and community college standards; more rigorous curricula and standards; entry and exit testing for transfer programs; and stricter sequencing